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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,097	09/04/2001	Hideaki Hirayama	04329.2629	1759

7590 03/29/2004

Finnegan, Henderson, Farabow  
Garrett & Dunner, L.L.P.  
1300 I Street, N.W.  
Washington, DC 20005-3315

EXAMINER
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KIM, HONG CHONG

ART UNIT	PAPER NUMBER
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2186

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DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/944,097

Applicant(s)

HIRAYAMA

Examiner

Hong C Kim

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 September 2001.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**Detailed Action**

1. Claims 1-12 are presented for examination. This office action is in response to the application filed on 9/4/2001.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

3. Receipt is acknowledged of information disclosure statement filed on 9/4/01, which the statement has been placed of record in the file. Information disclosed and listed on PTO 1449 was considered.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by (IBM) Shared Memory RAM Disk for a Cluster with Shared Memory IBM Technical Disclosure Bulletin, June 1993, Vol. 36 Issue. 6B pp 299 – 300.

As to claims 1, 5, and 9, IBM discloses the invention as claimed. IBM discloses a cluster system comprising: a plurality of computers (first paragraph, multiprocessor); a data storage device (first paragraph, shared memory); a cluster file system providing exclusive control for maintaining data consistency by using a lock function in order to offer shared access to a file recorded on the data storage device from a process operating on the plurality of computers (sixth paragraph); cluster shared memory map means for allocating an area for shared memory in an address space of the process and for mapping data of files managed by the cluster file system in the area (fourth paragraph); and cluster shared memory lock allocation means for allocating the lock function of the cluster file system to the shared memory and enabling exclusive control for maintaining data consistency on the shared memory (sixth paragraph).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4, 6-8, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over (IBM) Shared Memory RAM Disk for a Cluster with Shared Memory

IBM Technical Disclosure Bulletin, June 1993, Vol. 36 Issue. 6B pp 299 – 300 in view of Vishin et al. (Vishin) U.S. Patent 5,860,146.

As to claims 2-3 , 6-7 and 10-11, IBM discloses the Invention as claimed above.

However, IBM does not specifically disclose wherein access inhibit setting means for inhibiting an access to all pages in the allocated shared memory; data write means, when accessing the access-inhibited page causes a read or write page fault, for reading the data mapped to the page from the file recorded on the data storage device and writing the read data; and setting means for read-enabling the page where the data is written to be readable.

Vishin discloses wherein access inhibit setting means for inhibiting an access to all pages in the allocated shared memory (col. 2 lines 28-45); data write means, when accessing the access-inhibited page causes a read or write page fault, for reading the data mapped to the page from the file recorded on the data storage device and writing the read data (col. 2 lines 28-45, swapping reads on this limitation); and setting means for read-enabling the page where the data is written to be readable (col. 2 lines 28-45, valid reads on this limitation since it allows to enable read and write operations) for the purpose of increasing the access speed by utilizing a table and a status.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate wherein access inhibit setting means for inhibiting an access to all pages in the allocated shared memory; data write means, when accessing the access-inhibited page causes a read or write page fault, for reading the data mapped to the page from the file recorded on the data storage device and

writing the read data; and setting means for read-enabling the page where the data is written to be readable as taught by Vishin into the system of IBM for the advantages stated above.

As to claims 4, 8, and 12, IBM and Vishin disclose the invention as claimed above. IBM further discloses means for acquiring a lock, when the cluster shared memory is locked (sixth paragraph), Vishin further discloses access-inhibiting a page in a cluster shared memory area where a file managed by the cluster file system is mapped in the address space for the process (col. 2 lines 28-45); and means for writing data of an updated page in the cluster shared memory area back to a file managed by the cluster file system when the acquired lock is unlocked (col. 2 lines 28-45, swapping reads on this limitation).

### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

2. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the application (see 35 USC 133, MPEP 710.02, 710.02(b)).

3. When responding to the office action, Applicant is advised to clearly point

out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. He or she must also show how the amendments avoid such references or objections. See 37 C.F.R. ' 1.111(c).

4. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

5. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Hong Kim whose telephone number is (703) 305-3835. The Examiner can normally be reached on the weekdays from 8:30 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matt Kim, can be reached on (703) 305-3821.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to TC-2100:**  
(703) 872-9306

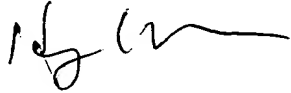
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Paper No.4

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).



HK

Primary Patent Examiner

March 22, 2004